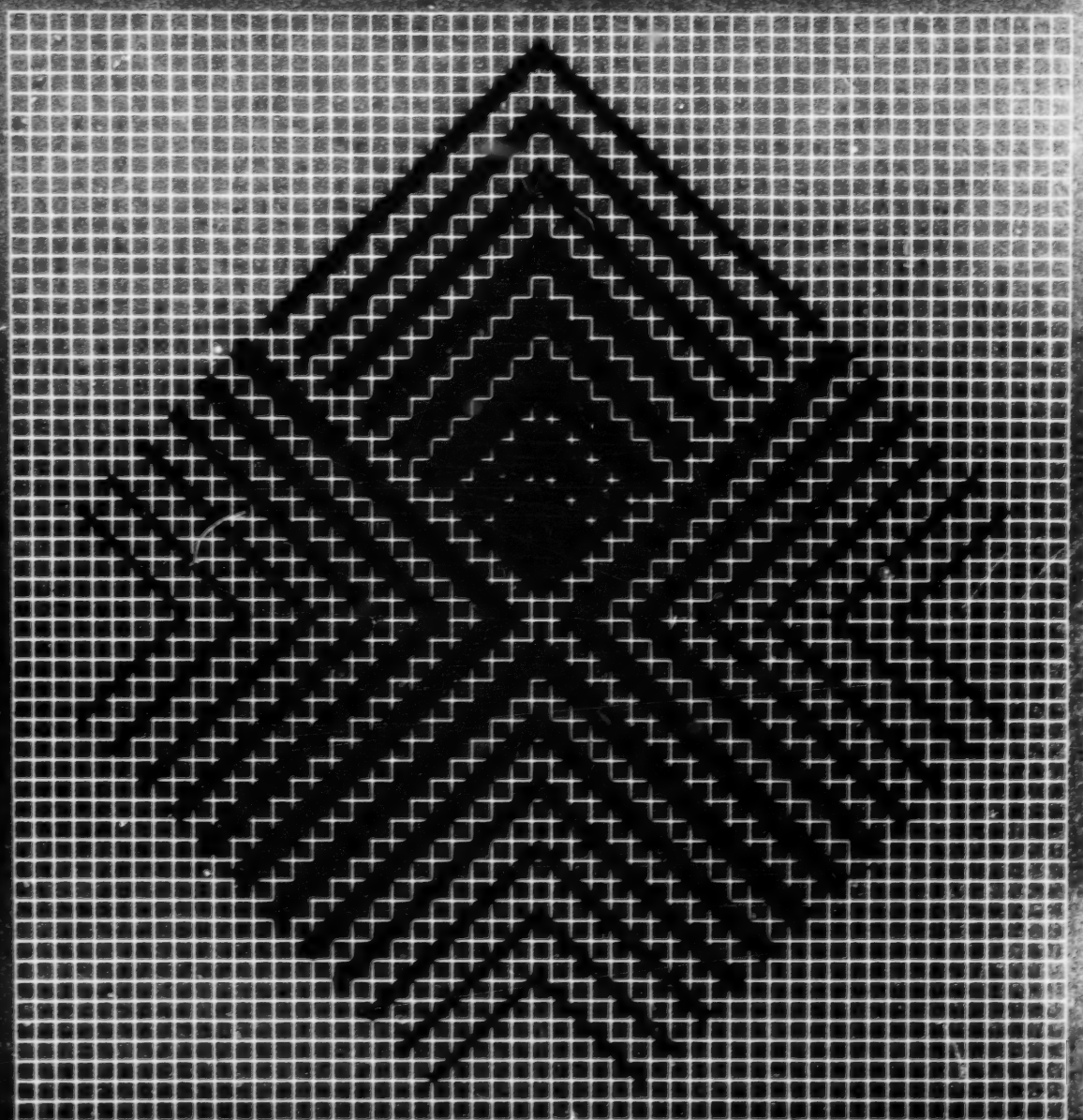
INDUSTRIAL TRAINING FOR HIGH-LEVEL SKILLS



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HIGH-LEVEL SKILLS

Ontario Manpower Commission

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INTRODUCTION

Ontario has, for the past several years, faced a shortage of highly skilled industrial workers. This represents a long-term phenomenon which has, of course, been moderated by the effects of the current recession. The development of such workers requires training in both a formal instructional setting and on-the-job. A comprehensive institutional training system, anchored in a highly developed community college network, exists to provide the necessary formal instructional base. However, there has been continuing concern regarding the availability of facilities that provide the on-the-job component of industrial training. The Government has commissioned at least three major studies on this issue during the past two decades, and the skills shortage problem was a contributing factor to the creation of the Ontario Manpower Commission in June, 1979. Within its mandate for the development of manpower policies for Ontario, the Commission is now prepared, after undertaking a thorough research effort, to address itself to this important issue. This paper describes the skills shortage problem, examines the adequacy of the existing supply of highly skilled workers and the industrial training programs that are in place to meet the demand for high-level industrial skills, and draws conclusions about the need for further initiatives.

I. THE SKILLS SHORTAGE PROBLEM

The shortage of high-level industrial skills has focused attention on the adequacy of the supply of such skills to meet current and projected demand. High-level industrial skills are usually defined as those blue-collar occupations requiring a minimum of two years of specific vocational training which would include a significant on-the-job training component.

A. IMPORTANCE OF HIGH-LEVEL SKILLS TO MANUFACTURING

The importance of manufacturing to the Ontario economy is well established. About 25 percent of the Ontario labour force is employed in the manufacturing sector. It has been estimated that when related and dependent service sector employment is considered, the total rises to over 30 percent of the Ontario labour force.

Manufacturing, however, is a troubled sector today, not only in Ontario, but in Canada. In addition to the current recession, Canadian manufacturing faces a range of serious problems including high and increasing import competition in the domestic market, a relatively low level of research and development, a relatively high level of foreign ownership reflected in branch plant operations, low levels of specialization and, in many cases, manufacturing establishments of sub-optimal size. Furthermore, at both the national and provincial levels, a serious problem is being encountered in terms of the quantity and quality of manufacturing manpower, particularly at the highly skilled level. The relationship between skilled manpower and performance in the manufacturing sector was identified by the late John Rhodes, then Minister of Industry and Tourism, at the Skills For Jobs Conference in June, 1978, where he stated:

> "We will only reduce our trade deficit on manufactured products by encouraging the growth of a healthy manufacturing sector employing the best skills and the best brains".

However, the "best skills and the best brains" have not always been domestically produced. Canada and Ontario have relied to a significant extent on immigration to meet their needs for highly skilled industrial manpower, despite warnings about the risks inherent in relying on other countries. Immigration has been on such a large scale that it has been estimated that over 75 percent of the highly skilled workers in Ontario manufacturing were trained outside Canada.[1] However, between 1974 and 1978, the number of skilled immigrants destined for Canada's workforce declined by more than two-thirds.[2] During the latter part of the 1970's, changes to immigration regulations and the declining attractiveness of Canada to highly skilled workers from Europe combined to reduce seriously what had been Ontario's traditional source of supply of such workers.

B. SHORTAGES OF HIGH-LEVEL INDUSTRIAL SKILLS

Much information already exists on the extent of the skilled labour shortage in the province. In October, 1979, the Ontario Manpower Commission released a report[3] which indicated that approximately 50 percent of 1,153 companies surveyed were encountering recruitment difficulties in a total of 250 occupations, even at a time when unemployment in Ontario was around 6 percent. These employers were attempting to fill 2,800 positions, with the largest requirements being for the skilled or highly skilled occupations of machine operators (401), general machinists (333), welders (138), and tool and die makers (113).

A study undertaken in 1979 by the Industrial Machinery and Equipment Manufacturers' Association of Canada showed that 88 percent of the Ontario respondents were encountering difficulty in hiring skilled tradesmen and that the most difficult tradesmen to replace were machinists, fitters and millwrights, welders, and maintenance mechanics. The Association learned that 500 additional journeymen would be required annually between 1979 and 1982 by the responding Association members alone.[4]

The Economic Council of Canada, in its Human Resource Survey of 1980, had similar findings: it found that mining and manufacturing establishments have been affected by shortages to a greater degree than other industry groups; that the most critical shortages were reported in high-level blue-collar skills, namely product fabricating and repair and maintenance; and that a substantial proportion of the employers expected to be faced with similar shortages over the subsequent four to five years.[5]

The publication of the Canada Employment and Immigration Commission, Forward Occupational Imbalance Listing, for April 1982, noted that the current recession has resulted in layoffs across the entire spectrum of the economy and that the number of unemployment insurance claimants has risen sharply for many highly skilled industrial trades. Nevertheless, once employment growth resumes, manpower requirements are expected to exceed supply in the following industrial occupations in the province: tool and die maker, general machinist, welder with fitting skills, wood patternmaker, electrical repairer with electronic skills, millwright, and instrument mechanic.[6]

C. THE ON-THE-JOB TRAINING BASE

The general dependence on other countries to train our manufacturing manpower has resulted in a relatively weak and underdeveloped domestic industrial training base.[7] The development of a training base that will produce a sufficient supply of skills also has been undermined by the cyclical nature of business activities. Because training for high-level skills is provided predominantly on the job, cutbacks in production during periods of weak economic activity have tended to reduce the level of training.

The portable nature of many of the high-level skills within industries and the wage differentials that exist among companies, as well as the inherent mobility of the Canadian labour force, often make "poaching" an attractive alternative to the investment inherent in the training process. Purchasing rather than developing high-level skills shrinks the "training-base" and the potential supply and raises tne issue of the equitable distribution of training costs. It is claimed that as long as only some employers train, there is a risk that they will be subsidizing those employers who do not. This point was made with some emphasis at the Skills For Jobs Conference in 1978 and during the Commission's subsequent contacts with employers. However, research conducted as part of the Industrial Training Council study, Barriers to Employer Sponsored Training, indicated that attrition of trainees during training and of skilled workers after completion of training was less than generally believed. The study found, in fact, that the majority of training firms surveyed reported that 10 percent or fewer of their trainees left before the completion of training. Similarly, most training firms reported that 10 percent or fewer of their trainees left within two years of completing training. Therefore, concern about the lack of mechanisms to ensure the equitable distribution of training costs may be exaggerated and ought not to be a serious obstacle to employers' training efforts.

The limited extent of industrial training for high-level skills has been identified in a number of studies. In 1973, Statistics Canada determined that only 8 percent of all Ontario's paid workers were taking employer-sponsored training courses. Further, on a national basis the proportion of workers in Canadian manufacturing industries and among workers in the nation's craftsmen production process and related occupations taking employer-sponsored training courses was only 5.8 percent.[8] A survey conducted in 1978 concluded that 12.7 percent of non-office employees in Canada received training; these trainees on average, received only seven days of training annually.[9] A 1977 review of a cross-section of manufacturing companies in Southern Ontario employing nearly 77,000 workers (over 15,000 of them hignly skilled) revealed that these companies had among them only 966 trainees. Further, four companies had 828 trainees, accounting for 86 percent of the total trainee population. Therefore, the remaining 65 firms had among them only 138 trainees.[10]

D. LARGE EMPLOYER COMMITMENT TO TRAINING

The most recent information on training activities and corporate policies of large firms demonstrates a continuing reliance on the general labour market for highly skilled tradesmen. A 1980 study by the Ontario Manpower Commission[11] revealed that, among 53 of the 60 largest manufacturing and processing companies in the province, approximately 55 percent of hiring needs in the 1977-80 period in nine highly skilled occupations were met internally through training completions.[12] A follow-up study in mid-1981 of the same companies concluded that most of these companies were continuing to rely on the general labour market for the majority of their hiring needs. In fact, there were some indications in the follow-up study that the rate of internal hiring was even lower than was found in the original study.

Large employers have considerable concentration of high-level industrial skills currently deemed to be in shortage. Based on the data that was supplied in 1980 by the 53 largest manufacturing and processing companies, it was found that:

- the 17,500 journeymen employed by these companies in the nine trades represented 7.6 percent of the total reported employment in these companies; and

- employment in the individual trades surveyed as a proportion of total estimated trade employment in the manufacturing sector in Ontario is significant; for example, the general machinists employed by the 53 companies surveyed represent about 16 percent of all machinists in manufacturing, tool and die makers - 22 percent, millwrights - 25 percent and industrial electricians - 46 percent.

1) 1981 Training Performance

The 1981 follow-up study focused on the hiring and training activities among the large employers surveyed in 1980. On the basis of apprentice/trainee to journeyman ratios and the extent of external hiring to fill vacancies, 30 of the 51 responding employers were considered to have an adequate training record while the training performance of 21 employers was judged to be less than adequate.[13] The latter group was continuing to rely on the general labour market rather than on

training to meet most of their skilled labour needs, thereby diminishing the potential development of an internal supply of skilled tradesmen. If the 21 "inadequate" trainers trained at the same rate as the "adequate" trainers and had they filled their vacancies from within the company to the same extent as the "adequate" training companies:

- the total apprentice/trainee population would have been 1,100, or about 770 more than reported in the companies, an increase of over 200 percent; and

- 185 fewer journeymen would have had to be supplied to the responding companies from the general labour market.

Some noteworthy differences between employers judged "adequate" and those judged "inadequate" were as follows:

- only 21 percent of all the positions staffed in the "inadequate" training companies were filled by tradesmen from within the company, compared to 43 percent among the "adequate" companies;

- the apprentice/trainee to journeyman ratios among the "inadequate" companies averaged 1:16.3, while for the "adequate" companies the ratio averaged 1:4.9.

To obtain an explanation of the companies' training performance vis-a-vis their hiring records and to gain a better appreciation of each company's policy on training, officials of the 21 companies deemed to have "inadequate" training records were interviewed during the summer of 1981. A wide range of explanations were offered as to why more training was not being undertaken. The most important reasons given were as follows:

- given current and projected unfavourable business performance, training cannot be given the priority that it otherwise may receive. In some instances, layoffs of skilled people have further undermined the companies' capacity to expand training programs;

- in the case of certain trades, peculiar production requirements may not be amenable to training. For example, large numbers of tool and die makers may be required at the pre-production stage, but once the production cycle is underway (which for some products may last as long as 10 to 15 years), only maintenance tool and die makers would be required;

- in a few companies, collective agreements were cited as inhibiting training;

- given the success that most large firms had in recruiting for the skills they need, they often see little economic justification for undertaking training programs;

- implementation of specific training policies and programs are often carried out at the plant or division level; and

- the nine industrial trades examined by the Ontario Manpower Commission represented a relatively minor proportion of the total workforces of some companies and therefore did not necessarily reflect the range of training that did occur.

2) Corporate Training Policies

In November, 1981 the Manpower Commission met with the chief executive officers or designated senior officials of those companies that had not previously articulated their corporate training policies during the course of the previous interviews. Although most companies stated in these meetings that, in principle, their long-term corporate policies were to meet the bulk of their skilled needs internally, a number of difficulties in achieving this goal were cited by one or more company representatives; for example:

- the objective of 100 percent self-sufficiency is both unattainable and inequitable. In order to fulfill the responsibilities of a "good corporate citizen", some vacancies must be filled from the general labour market;

- to replace unexpected resignations, some additional scope is needed for hiring directly from the general labour market;

- in future, in some cases there may be less need for traditional skills and approaches to training while new technologies may require more specialized skills and flexible training programs;

- emphasis is often placed on training for company-specific requirements, with less attention devoted to traditional skills that are readily portable; and

- in some instances, the apprentice-journeyman ratios and seniority provisions in collective bargaining agreements pose an obstacle to expanding training programs, particularly during layoffs. Often there are no special provisions in the collective agreements to protect apprentices, although the ratios can be waived in certain circumstances.

The continued monitoring by government of private industry training initiatives was viewed by some as a partial solution for dealing with the skills shortage problem. A few companies were also prepared to provide qualified support for compulsory legislation depending upon "how it would be applied and how onerous it might be". It was suggested by one company that if, for example, a levy/grant system were adopted, it be done in co-operation with the unions and accompanied by a provision for government financial assistance to protect apprentices during times of layoff. Concern was raised that legislated solutions might, however, create unforeseen and unavoidable rigidities in the system and thereby force companies to reassign people and business to other jurisdictions.

In sum, company officials accepted the Government's objective of training for self-sufficiency, i.e., providing for the major part of their own needs internally. However, in defining the concept of self-sufficiency, the officials noted that business conditions often influence the extent to which a company may be able to meet most of its manpower requirements internally. In addition, self-sufficiency must allow some scope for recruiting outside the company to fill vacancies due to unpredictable resignations. It must also respect the stipulations of collective bargaining agreements, and recognize the need for training that emphasizes the development of company-specific skills.

II. INITIATIVES TO ADDRESS THE PROBLEM

As most initiatives to address this problem have originated with government, it is necessary to understand the evolution of government involvement in industrial training in the province, commencing with the Apprenticeship Act of 1928. This Act, which was the first of its kind in Canada, was an outgrowth of pressure from the Ontario construction industry, led by Mr. Joseph Piggott. As a result, the Act covered only the construction trades of bricklayer, mason, carpenter, plasterer and painter/decorator. In 1930-31 in a move to bolster the system, all construction companies in Ontario were levied a charge of one-eighth of one percent of their payrolls to meet the cost of the apprenticeship system. Because of opposition from smaller construction companies, the levy was discontinued in 1932 in favour of direct operation by the provincial government.

In 1964, the Apprenticeship Act was repealed and the Apprenticeship and Tradesmen's Qualification Act, 1964 was passed. Subsequently amended, it is now The Apprenticeship and Tradesmen's Qualification Act, and is the governing legislation for apprenticeship training in the province. This Act, based in part on the recommendations of the Select Committee of the Legislature on Manpower Training was unlike its predecessor which provided only for Schedule A (Building and Motor Vehicle trades) and Schedule B (Hairdressing and Barbering trades). The new Act provided for an apprenticeship program which would apply to trades and persons in all sectors. Concurrently, the Apprenticeship Branch was reorganized to deliver skilled trades training in four divisions: industrial, construction, motive power, and service, and was designated the Industrial Training Branch.

The extension of compulsory certification by regulation to various electrical and mechanical trades which cut across divisional lines resulted in an almost chaotic situation in general industry. Appeals were made for relief from the Act by numerous labour and management interests and at the urging of these groups, the General Advisory Committee on Industrial Training was established in 1966 to assess the impact of compulsory certification on trades in general industry.

In an interim report, the General Advisory Committee recommended that the Act and Regulations be changed as expeditiously as possible to exempt persons in general industry. While the Committee advocated that manufacturing be exempted completely, the government decided to exempt general industry only from the compulsory registration and compulsory certification provisions of the Act.

The Committee, while recognizing that apprenticeship in industry merited strong support where it was effective and appropriate, also recognized the need for a new and distinct approach to training in general industry. The modular approach was perceived as the solution with the greatest potential at that time, and the Committee recommended that it be pursued through pilot projects, which, if validated, would set the course for industrial training in the future. The effectiveness of the pilot projects provided the impetus for a more comprehensive approach to modular training in high-level skills. In the late 1960's and early 1970's, this program was adequately resourced and many skill modules were developed. Field evaluations were carried out in certain industries in the early 1970's. However, support for this alternative to conventional apprenticeship weakened under pressure from vested interests and during the mid-to-late 1970's, only modest effort was expended on it. Noteworthy, however, was the contribution of this program to training high-level skills in the petrochemical industry and in the training of underground hard rock miners.

In addition, in the late 1960's the provincial government introduced the Training in Business and Industry Program (TIBI). The program operated via a three-way partnership among employers, employees, and the Ontario government, and had as its primary purpose to encourage employers to provide short-term occupational training and retraining for employees. The training was to be used to further develop existing portable skills or to develop additional skills that were complementary.

As a result of continuing problems in the supply of high-level labour for general industry, the Task Force on Industrial Training was established in 1970 under the chairmanship of Dr. W. R. Dymond. Because of the time required to complete its research, the Task Force did not report until July, 1973. By that time, much of the urgency appeared to have passed and few of the study's recommendations were implemented.

During the mid-1970's, the Ontario Manpower Co-ordinating Committee, (OMCC) a body composed of deputy ministers with manpower-related responsibilities, attempted to provide a sharper focus on manpower issues in the province. In 1978, the Ontario Manpower Co-ordinating Committee organized a major conference, "Skills For Jobs", to address the co-existence of high and rising levels of youth unemployment and a serious shortage of certain high-level skills. The Conference led to the establishment of an Ad Hoc Advisory Group on Skills for Jobs reporting to the Minister of Labour. By mid-1979, further initiatives were felt to be necessary by Cabinet and the Ontario Manpower Commission was created.

In 1976, the Minister of Colleges and Universities established the Industrial Training Council to advise him on skills training and development in the province. The Council was composed of employer and trade union representatives with experience in the training field. Public meetings were held across the province and research studies were commissioned. Through these activities, the Council developed the "Statement of Training and Development Policy for the Ontario Government", and recommended it to the Minister of Colleges and Universities, the Minister of Labour, and to the Ontario Manpower Commission in early 1980.

In 1978, the Ministry of Colleges and Universities developed, in consultation with the Industrial Training Council, an initiative known as Employer Sponsored Training. This initiative, which was funded primarily by the Canada Employment and Immigration Commission (as are traditional apprenticeship programs), was designed to expand the involvement of employers and trade unions in training through the medium of local industrial training advisory committees. To date, more than sixty local advisory groups have been established and more are being added. The objective of the initiative was to develop non-traditional training approaches in occupations where shortages were judged to be critical. The incentive was to be higher wage subsidies payable to employers over a three-year rather than a one-year period.

In September of 1978, the CEIC announced a new, federal initiative Critical Trade Skills Training (CTST). In Ontario, the provincial government agreed to fully integrate EST and CTST as a unified federal/provinicial initiative to alleviate the critical shortage of highly skilled workers in this province. CTST provided wage subsidies to employers training for high-level, industrial skills for periods longer than the conventional one-year support for general industrial training.

In February 1981, the Minister of Employment and Immigration, the Honourable Lloyd Axworthy, announced a temporary initiative of an "enhanced CTST incentive" to stimulate even further efforts on the part of industry to ease the shortage of skilled tradesmen. This initiative provided for a doubling of the subsidy level to 100 percent during the first year of training. Wages were not reimbursed beyond $250 per week and for every enhanced trainee the employer must have had one first-year trainee under the regular formula in place on January 1, 1980. Contracting under the enhanced formula ended on March 31, 1982.

In 1982 the federal government introduced the National Training Program, designed, among other things, to meet current and projected skill shortages, with particular emphasis on stimulating industrial training. To meet this objective, the federal government decided to continue to rely on the wage subsidy approach and the Critical Trade Skills Training Program, but extended the total number of hours eligible for reimbursement. In order to generate more training in critical trades during the fiscal year 1982-83, a period of economic downturn, the first-year CTST wage reimbursement which had returned to the regular 50 percent level, was raised to a 75 percent level. During the current fiscal year, the subsidy level has reverted to 50 percent for a maximum of 1,600 hours in each of the two years of training. The occupations previously covered by CTST continue to be designated and the number of designated occupations is expanding.

In addition to modifying the subsidy program, the total Ontario allocation for the program has been significantly increased. In 1981-82, approximately $13 million was allocated for Ontario; in 1982-83 this amount was increased to $19 million; for fiscal year 1983-84 the budgetary allocation calls for an increase to approximately $30 million, representing well over one-half of all federal industrial training assistance in the province. This indicates a substantial shift away from short-term low- and medium- level skill training to longer term high-level skill training.

In 1981, as part of the BILD initiative, the Government announced an expansion of the Training in Business and Industry Program. The emphasis of the expanded initiative (termed TIBI II) is concentrated on short-term training for high technology skills (e.g., micro-processing, biochemistry) and is aimed at ensuring that existing employees are qualified to maintain their employment. The program is not intended, however, to be a general response to the need for strengthening the industrial training base or alleviating the high-level industrial skill shortages.

The 1983 Ontario Budget introduced two new training incentive programs, as well as enriching funding for TIBI and technical upgrading programs. The two new programs are designed to expand work-place-centered training; one program is directed towards short-term and the other towards multi-year training. Incentives are offered to encourage the completion of training objectives.

It can be seen that over the years, a variety of approaches have been utilized in an attempt to increase training and to broaden significantly the province's industrial training base. Most have been based on the premise that the private sector would respond if it understood the magnitude and severity of the problem and if government financial incentives and training support were judged by employers to be adequate.

III. EFFECTIVENESS OF PAST INITIATIVES

In examining the skills shortage problem, the data presented earlier were "snapshots" of manpower imbalances at particular points in time. The Ontario Manpower Commission, in order to provide longer term supply/demand indicators, has been undertaking a comprehensive labour market forecasting exercise.[14] While one must be cautious about relying heavily on such econometric exercises in designing policy initiatives, the results do reinforce the general impressions gathered in the studies cited above. In the blue-collar medium-skilled occupations (six months to two years training) and highly-skilled occupations (more than two years training), a shortage of trained workers may occur,even in a low growth economic scenario, over the next five years. Shortages may not occur as quickly as had been anticipated owing to the number of trained workers currently unemployed who will be available to be reabsorbed into the labour force as the economy recovers. However, once this stock of trained workers is exhausted, the long-term problem of training below the level necessary to replace those retiring and to support growth is expected to re-occur.

The introduction of Employer Sponsored Training/Critical Trade Skills Training in 1979 has proved to be a useful and positive initiative for increasing the training in industry of a number of high-level industrial skills, For example, as of October 31, 1981, there were 2,388 active trainees, as of July 31, 1982 there were 4,434 active trainees. The number of participating companies increased from 1,350 to 1,786 in this time period. The 86 percent increase in the number of active trainees during the nine-month time period is encouraging, particularly given the current unfavourable economic climate. On the other hand, the inability or unwillingness of a significant number of companies who have signed EST agreements to realize their training intentions is a source of some concern. It is too early to tell whether EST/CTST is sufficient for meeting high-level industrial skill needs and for achieving an expanded industrial training base in Ontario. As of now, it appears that anticipated shortages in the highly-skilled industrial trades are several times greater than the EST/CTST enrollment.

Furthermore, of the total number of trainees under the EST umbrella, only about ten percent were in the large companies surveyed by the Ontario Manpower Commission in 1981, and over one-fifth of these trainees were concentrated in just one company. It is evident that large firms in the province have not been taking sufficient advantage of the subsidies available through EST/CTST.

IV. ALTERNATIVE APPROACHES TO ENHANCE INDUSTRIAL TRAINING

The Commission has considered what further measures may be available to enhance industrial training should the current federal and provincial initiatives prove inadequate. Such measures would be aimed at encouraging firms in the manufacturing and processing sectors to provide more on-the-job training.

Whatever the measure selected to stimulate additional industrial training, it should be relatively simple, have minimal bureaucratic involvement, and should provide maximum ability to utilize companies' own knowledge and experience in initiating their training programs. Since it is recognized that some firms are better suited to train than others, every company should not be expected to provide training; however, it may be appropriate for all firms to share in the cost of training given that all benefit from the availability of a skilled labour force.

The forms of governmental action other than wage subsidies that are most frequently proposed to stimulate industrial training are:

- A levy-grant system
- A tax-credit system
- Contract compliance.

A. LEVY-GRANT SYSTEM

Under the levy-grant system, employers are required to contribute to the cost of training by paying a levy into a fund. The proceeds from the levy are then used to underwrite the cost of training programs. A levy system was operated by the construction industry in Ontario in the early 1930's. This system is still operated, for example, by the Toronto local of the International Brotherhood of Electrical Workers and the Electrical Contractors Association of Ontario. Some form of a levy-grant

system has been adopted by at least four European countries. The United Kingdom has utilized a levy-grant system since 1964. Variations of it are found in West Germany, where it operates only when there is a shortfall in the number of training places available and in France, a portion of payroll must be put into vocational training. In Belgium, all enterprises of 100 or more workers are required without government assistance to employ trainees; failure to comply results in the application of a levy.

The primary objective of a levy-grant system is to increase the total level of investment in training. The levy-grant mechanism seeks to remove all or part of the costs of training from individual employers and have these costs borne by employers collectively. The mechanism operates through the imposition of a levy on firms employing transferable skills, and redistribution of funds through grants to those employers who undertake training. The levy-grant system is thus intended to effect a transfer of funds from non-training firms to training firms and therefore to provide an incentive to the former to undertake training for their own needs and to the latter to train beyond their own needs.

The most comprehensive application of the levy-grant system is in the United Kingdom, and it is this model which is most frequently proposed for Ontario by advocates of this system.

The system, established in 1964 with the passage of the Industrial Training Act, called for a sectoral approach in training decisions. The main objective of the Act was cost redistribution between "poaching" and training firms. Although some redistribution of monies from firms with low to high training activity was achieved, "poaching" firms did not contribute substantially to the cost of training. The objective of full cost redistribution was abandoned in 1973 with the passage of the Employment and Training Act. This resulted in changes in levies as well as the assumption by government of administrative costs, necessitating deficit financing with revenues made up from the general fund. Occupational shortages in certain key skills have persisted, although the quality of training improved. Industry Training Boards, which were established to administer the program, have proven to be large, costly and bureaucratic.

It is important to recognize, however, that the British experience is with a particular form of the levy-grant system. One could presumably introduce in Ontario a modified version of the system that would be less costly and bureaucratic than the British System and that would be reflective of the industrial nature of this province.

B. TAX-CREDIT SYSTEM

A tax-credit system whereby the government would establish a refundable tax on salaries, wages and other employee renumeration presents a variation on the levy-grant system. Under this concept a tax would be applied to employers, equal to a designated percentage of their payroll. Any amount of money up to a designated percentage of payroll spent on training and approved by existing training authorities would be credited against the payroll tax. Money spent on approved programs beyond the designated tax could generate additional subsidies. Government would continue to provide assistance to firms in mounting training programs. There could be exemptions for firms who might not be well-suited for training, such as those with small workforces.

Basically, this proposal is a form of tax incentive aimed at increasing the volume of high-level skill training. While the tax would be applied generally, the credits granted would be restricted to those employers who train for skills deemed to be in critical shortage and which represent a bottleneck to industrial development. This approach would implicitly require all firms to share in the cost of training. At the same time, it would encourage those firms better suited to train to expand their training activities. It is important to recognize that unless the tax credit were large enough, many employers might still find "poaching" the most economical solution to meeting skill needs and simply add the tax to the cost of doing business, foregoing the potential tax credit.

C. CONTRACT COMPLIANCE

This term describes the requirement that a supplier of goods and services meet contractual conditions determined by a purchaser. Contract compliance is most frequently used by the U.S. government to ensure that women and minorities have equal opportunity and access to entry level positions, training and promotion in companies holding or seeking government contracts. It usually requires that a supplier prepare and file an affirmative action plan to redress imbalances and to make "every good faith effort" to achieve the goals of the plan. Failure to file a plan or to make a good faith effort to achieve it can lead to cancellation of existing contracts or debarment from future contracts.

U.S. business apparently views contract compliance as a voluntary rather than a compulsory program on the basis that if a firm does not wish to meet the purchaser's conditions, it is free not to bid on the contract. Many businesses insist that purchasing conditions be accepted by their suppliers and they are apparently willing to concede this principle to the government as well.[15]

A contract compliance approach is not new to Ontario. It was recommended by the Select Committee of the Legislature on Manpower Training in 1963. Although no regulations were issued under the Act, the intent of the legislation was to require acceptable apprenticeship programs of suppliers to the Ontario government. With compulsory certification of the main construction trades, the same result was achieved without recourse to this provision.

Proponents of a contract compliance approach suggest that it is administratively straightforward and would be less disruptive to the private sector than other alternatives. It would also have an immediate impact on major companies which are suppliers to the provincial government and/or grant or loan recipients. Contract compliance might be more easily accomplished than, for example, a tax-credit system, and would impact directly on non-training employers, particularly large firms.

It is noteworthy that among the 21 companies with "inadequate" training records identified in the 1981 Ontario Manpower Commission's follow-up survey of training among large firms, more than half have received provincial government (including Ontario Hydro) contracts, grants or loans in the 1977-1980 period. These 12 companies employed almost 4,000 journeymen, but only about 275 apprentices and trainees, and they had recently filled over 85 percent of their vacancies externally. If these twelve companies were to have trained at the same level as other large corporations doing business with the Ontario government, they would have had an additional 400 apprentices/trainees and their dependence on the general labour market would have been at about the 50 percent level of the other recipients of provincial monies.

There are, of course, certain shortcomings in the contract compliance approach. Among these are:

- It attempts to induce all contracting companies to train, regardless of their capacity to train;

- Because of its restricted focus (i.e. only on government suppliers), its value may be somewhat symbolic, even if instrumental in demonstrating provincial commitment to addressing the skills shortage problem; furthermore, equity considerations are raised because of the limited coverage of the program;

- It presents some difficulties in terms of suppliers not located in the province; and

- There may be administrative complexities in the government's purchasing process.

SUMMARY

An assessment of the alternative approaches described above indicates that:

The levy-grant or tax-credit systems could be successful in reaching targetted skills, in increasing training activity and in equalizing training costs among employers. These systems could have a high capacity to generate funds to support training objectives and could also be designed to minimize bureaucratic involvement.

The contract compliance approach could be successful in reaching targetted occupations. However, its success would be mitigated by the limited number of employers affected. The approach would not generate revenue, but the cost to the provincial government would be negligible, and bureaucratic involvement could be minimal.

V. CONCLUSIONS

The Commission believes that continued reliance on immigration to meet our skilled manpower needs would undermine efforts to increase training capacity. As long as employers believe that they can meet their general needs for skilled manpower by importing from abroad, they will be reluctant to expand training opportunities.

As previously noted, the federal National Training Program contains provisions to stimulate industrial training of high-level skills. The Ontario government is working closely with the federal government in an effort to have employers make optimum use of the wage subsidy program, and through a new federal-provincial agreement pursuant to the National Training Act, is directly involved in the planning and delivery of the industrial training component of the National Training Program. Specifically, the Province is participating with the federal government in:

- determining which skills need to be developed;
- setting of industrial training priorities;
- planning and delivery of industrial training programs;
- monitoring and assisting in the development of training courses; and
- evaluating the impact of the industrial training programs, particularly in terms of expanding the industrial training base in the province.

In addition, the Province has initiated the two new training incentive programs announced in the 1983 Budget. It is, of course, too early to judge the effectiveness of these new programs. However, these initiatives cannot be considered a complete solution, since only part of the program is directed towards multi-year training and, in any case, the numbers to be trained are considerably smaller than anticipated shortages.

The emphasis that both the Ontario and federal governments are placing on incentives for training is based on the premise that, as the economy improves, employers will be more willing to train and that this willingness will be nutured by the

public funding available to them. Past experience suggests that the advent of economic recovery alone may not result in a level of training beyond that which existed before the recession. If it does not, government may need to consider either allocating additional public funds to subsidize training or introducing measures that do not rely on direct public financing.

One of the problems in developing a sound policy response to the industrial training problem is the paucity of information on the full extent of training activities being undertaken in the private sector, particularly those which do not receive public support. In order to establish the basis for the design of further initiatives, it is essential to develop a comprehensive data base on industrial training. In this regard, the province needs to work with the federal government and the private sector in order to develop ways and means of collecting the required information.

In light of the current recession, any action which increased private sector costs would be inappropriate at this time. The Province should, however, inform the private sector of its intention to monitor all industrial training activities, and that, although responsive action by employers is expected, Ontario will review with the federal government other measures which may be required.

FOOTNOTES

1 Case Studies on Aspects of Training Upper Skilled Blue-Collar Industrial Workers. Robertson-Nickerson, 1977.

2 Speech to the Canadian Manufacturers' Association by Honourable Lloyd Axworthy, May, 1980.

3 Manpower Requirements and Hiring Plans of Ontario Employers in Manufacturing Industries, Ontario Manpower Commission, 1979.

4 Skilled Tradesmen Requirement and Training in the Industrial Machinery and Equipment Manufacturing Sector, 1979-1982, MEMAC.

5 Skills and Shortages, Economic Council of Canada, 1980.

6 Forward Occupational Imbalance Listing, Ontario, Employment and Immigration, Economic Services Branch, Ontario Region, April 1982.

7 It is, of course, obvious that in special circumstances immigration is the only feasible approach to meeting short-term critical skilled manpower needs.

8 The Labour Force Survey, Employer Sponsored Training Programs, Statistics Canada, January, 1975.

9 Education and Working Canadians, Report of the Commission of Inquiry on Educational Leave and Productivity, June, 1979.

10 Case Studies on Aspects of Training Upper Blue-Collar Industrial Workers, Robertson-Nickerson, 1977.

11 Training for Highly Skilled Workers in Large Manufacturing and Processing Firms: Survey Results, Ontario Manpower Commission, September, 1980.

Footnotes (cont'd.)

12 The nine occupations included in the study were: General Machinist, Mould Maker, Tool and Die Maker, Electrician/Pl. Maint., Fitter-Structural Steel/Platework, Industrial Millwright/Ind. Maint. Mech., Patternmaker, Sheet Metal Worker (Plant), Welder (Arc and Gas). These trades obviously represent only a small part of all highly skilled industrial occupations. They are, however, strategic occupations within the manufacturing sector, and are, therefore, useful examples in examining generalized industrial training trends.

13 A combination of two factors formed the basis for judging the adequacy of training: a comparison of each company's apprentice/trainee to journeyman ratio and of the percentage of external hires to the averages for all responding companies (1:6.3 and 63 percent respectively).

14 Labour Market Outlook for Ontario, 1981-1986, Ontario Manpower Commission, Ministry of Labour, 1981.

15 Summary of the American Experience with the Federal Contract Compliance Program. Leah Cohen, Canada Employment and Immigration Commission, 1979.